Results

Methods: Broth microdilution antimicrobial susceptibility testing was performed (IHMA, Inc., Schaumburg, IL), and antibiotic susceptibility testing was performed at a central laboratory.

Conclusions: Ceftaroline was highly active in vitro against MSSA worldwide with >99% susceptible. Sensitivities of IP and OP isolates were similar. MSSA isolates from inpatients and outpatients combined were non-susceptible to clindamycin (100%), trimethoprim-sulfamethoxazole (100%), and vancomycin (99.7%). Non-susceptibility of MRSA to ceftaroline was most often seen in Europe (26.7%) and the Asia-Pacific and Latin American regions showed reduced activity of ceftaroline and comparators against MRSA resistant to linezolid, daptomycin, and vancomycin.

The in vitro activity of ceftaroline and comparators against each organism group is provided in Table 1. Ceftaroline MIC distribution by region are provided in Figures 1 through 5.

Results Summary

• Globally, 91.0% of MRSA from inpatients, and 94.4% of outpatients were susceptible to ceftaroline (MIC ≤ 0.5 mg/L). Percent susceptible for both groups were reduced in Asia-Pacific. 16.0% of MRSA from this region, respectively, had MIC values of 2 mg/L (Figure 1 and Figure 3).

• A total of 1,016/1,750 (59.1%) of MRSA from in- and outpatients combined were non-susceptible to ceftaroline. The MRSA isolates non-susceptible to ceftaroline were categorized as having an MIC of 2 mg/L, whereas 0% (0.0%) had an MIC of >2 mg/L.

Conclusions

• Ceftaroline maintained potent and consistent in vitro activity against MSSA and MRSA from both in- and out-patient settings, with 100% susceptible.

• Globally, ceftaroline susceptibility against MRSA was higher for out-patient isolates compared to in-patient isolates (94.4% vs. 91.0%), respectively. This difference was seen in all regions except North America.

• Non-susceptibility of MRSA to ceftaroline was most often associated with MICs of 2 mg/L. This non-susceptibility was most often observed in Europe, Asia-Pacific and Latin American regions.

• Reduced rates of susceptibility due to higher numbers of isolates with MICs ≥ 2 mg/L.

• Differences in ceftaroline activity by patient location warrant continued monitoring of ceftaroline activity to detect any changes in the drug's in vitro activity as usage increases.